

Remote Channels as an Opportunity in Redesigning Portuguese Banks' Business Model – an Empirical Study in Lisbon Metropolitan Area

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Abstract - Facing an unfavorable economic environment since 2007 the Portuguese banking sector has been unable to generate profitability levels capable of ensuring the industry's attractiveness to investors. The solvency adequacy measures required by regulatory authorities forced the paradigm change in the banking business model. The widespread diffusion of technological innovation in Portuguese society enhances the use of remote banking access channels such as internet banking service (IB) and the ATM, while the traditional branch channel usage is decreasing. A study conducted in the Lisbon area, with 191 responses obtained, revealed that the channels with greater usage intensity are the ATM and IB. It further revealed that there are behavior dimensions on the IB use with direct effect on customer retention. Satisfaction with IB service, perceived switching costs and favorable price perception affect customer retention in their IB service. The findings of this research also confirm that satisfaction with IB service and perceived service price have a direct effect on repurchase intention.

Keywords - Portuguese banking sector, internet banking, remote channels, self-service technologies.

1. Introduction

Following the economic and financial crisis the Portuguese Banking System (PBS) return on equity (ROE) decreased about 76% when compared to the values prior to the crisis, which has been penalizing the sector's attractiveness to investors. Factors such as the funding difficulty of the banking system in the international markets, the increase in credit and default risk and the deterioration in consumer confidence level aggravated the scenario in which the

sector develops its activity. The inevitable demand for a deleverage process of the sector under the Economic and Financial Assistance Plan (PAEF) aimed to ensure greater stability in the banking system and established demanding capital ratios and goals.

The objective in PAEF set a credit-deposit ratio of 120% by the end of 2014, a 25% decrease over the present value, and a core Tier 1 capital of 9% and 10% at the end of 2011 and 2012 respectively.

Given the paradigm change, banks are required to revisit their business models. Models fundamentally based on credit have been converted into models focused on customer assets which represent a more stable funding source and in turn allow the sector to become less dependent on the financial markets. This trajectory to a "back to basics" model encounters various difficulties, especially within a stressed economy environment and in a context of widespread deterioration of the labor market and consumer confidence.

These demands forced the paradigm change, previously based on credit granting into a model focused on attracting customer assets. Given the decrease in the banking sector's net interest margin and revenue, a new aim on costs has also been explored, for example, involving the downsizing of the branch network. However, there is still a huge potential in exploring the current technological development of the banking network service and existing distribution channels. The cost-to-serve should not be neglected, neither in the cost reduction perspective, nor in the maximization of customer

service alongside the remote channels (internet banking, call center, ATM's, mobile banking) which stand for important distribution channels.

2. Research Objectives

This research aims to ascertain how remote channels may represent an opportunity (becoming a more representative distribution channel) in redesigning the sector's business model (specially within the sector's deleveraging process), alongside with a greater cost efficiency and maximizing customer relationship.

It therefore becomes necessary to identify aspects that influence IB users' behavior in Portugal (for the purpose of this study, based in the context of Lisbon Metropolitan Area) and those that can particularly influence customer retention. Thus, bank managers can, supported by the adequate knowledge of the decisive factors affecting customer behavior, adopt strategies and actions to ensure existing IB customers loyalty towards the service and simultaneously strengthen their customer bases.

3. Literature review

The development of technology is significantly changing service providing based on an earlier paradigm of "low-tech, high-touch" (Bitner *et al.*, 2000). Customers are becoming, ever increasingly, fans of self-service technologies (SST), "*customers produce services for themselves without assistance from firm employees*" (Meuter *et al.*, 2005). These are services with different characteristics from those offered by traditional channel (branches), and provide a more convenient access with regards to place and time, and yet, do not involve the personal contact with employees of the branch (Meuter *et al.* 2005).

According to Sathye (1999) internet banking "*involves consumers using the internet to access their bank and account, to undertake banking transactions (...) accessing accounts, fund transfer, and buying financial products or services online*". Typically, this is a channel with lower pricing, convenience and accessibility advantages "*when they want it and from where they want it*" (Mols, 1998), and provides greater privacy on customer interaction with the bank.

The IB segment ("*internet banking segment*") consists of customers who do not value personal relationships with their bank, with higher academic qualifications and belonging to upper and middle classes (Mols, 1999).

Various aspects such as convenience (available 24 hours a day, 7 days a week), quick access (loading sites), ease of use, trustworthy information, perceived usefulness, ease of use, perceived risk (security, confidentiality and privacy in the use of IB), strengthening security, lower operation costs, easier access to product information and price, product purchase convenience of associated services are the most valued attributes by customers and that most affect IB adoption (Liao and Cheung, 2002; McKinsey, 2011; Yiu *et al.*, 2007; Porter, 2001).

On the other hand, in the perspective of banks, advantages include lower selling costs per transaction, since the costs of an electronic transaction are six times less than its manual processing (Kalacota and Freire, 1997, cited by Proença and Rodrigues, 2011), enhanced access to markets (Porter, 2001) in remote areas throughout the country and therefore with less geographic branch coverage.

An internet banking strategy must be defined, integrated in the overall corporate strategy and market positioning. This integration must be carried complementary to approaches through the different channels (and not cannibalizing them) and creating competitive advantages difficult to be matched by competitors (Porter, 2001).

The definition of the mentioned strategy involves investment in the infrastructure and multi-channel systems which integrate the various channels used by clients (McKinsey, 2011), developing CRM (customer relationship management) models integrated into the company value chain (Porter, 2001). Relationship marketing represents an excellent opportunity in the multi-channel context given the potential of approaching each and every client in a personalized way and according to their specific needs and preferences.

The internet boosts competitive rivalry among existing industry players and reduces barriers to entry (for example the entry of exclusively virtual banks) given the inherent lower investment requirements (Porter, 2001). This author states that the abundant availability of information in the current knowledge society shifts bargaining power to customers. Customers, overall better informed, easily compare products and prices which in turn increases the pressure on the profitability of the sector. Simultaneously, they represent a threat to banks due to the greater potential on customer dropouts (Mols, 2001).

The uncertainty of the technological impact in customer-bank relationship (since the internet allows easy comparison between bank offers), leads to the need for banks to be fully aware of the aspects that influence customer behavior when using remote technologies, namely the IB.

• Customer retention

Retention is defined as the future propensity of an IB customer to maintain their current service (Ranaweera and Prabhu, 2003; Wong and Mula, 2009) and is also one of the most important indicators of customer satisfaction (Danesh *et al.*, 2012).

A loyal customer increases overall involvement and business over time, thus increasing the profitability that represents in the firm base (Reichheld and Sasser, 1990). According to these authors, in the banking sector, reducing dropout rates by 5% can represent an increase in profitability by as much as 85%. Additionally, costs of attracting new customers are substantially higher and may represent five to seven times more the period a company needs to spend on attracting new customers when compared to the retention of existing ones (Bhote, 1996 cited by Galbreath, 2002).

Convenience, proximity to home and to the workplace are leading reasons for selecting a bank. Other factors such as maintaining a loan in a bank, domiciling salaries, parents' choice influence, recommendation, service characteristics, interest and commissions / service fees, expectations of service levels and the image and reputation of the bank (Banco de Portugal, 2011; Martenson, 1985; Devlin, 2002; Devlin and Gerrard, 2004) are factors influencing the retention of customers with their banks.

IB users exhibit greater loyalty, greater propensity to recommend their bank, higher repurchase intention and lower price sensitivity (less likely to change to another bank) than non-users, are more prone to place claims, thus granting their current bank the opportunity to promote improvements (Mols, 1998).

There were two items used in the questionnaire measuring propensity to dropout in different time periods: in the next three months and in the next six months (Wong and Mula, 2009).

• Repurchase intention

Repurchase intention is defined as the intention to "*repeat purchases over time, and eventually, new products with greater added value for the company*"

(Rodrigues, 2008). If the use of PC banking represents a positive experience with which users perceive a higher added value they will continue to use the service, intending to continue conducting business with their bank in the future and in some cases even increasing it (Mols, 1998).

According to Mols (1998) and Proença and Rodrigues (2011), SST users reveal higher repurchase intentions than non-users. Santonen's (2007) findings reveal that repurchase intention is a crucial component of service loyalty. We will therefore test the following hypothesis:

H1. For internet banking users the higher satisfaction level, the greater their intention to repurchase.

In this study we used two items validated by Proença and Rodrigues (2011), one of them also present in Santonen's study (2007).

• Customer satisfaction

Customer satisfaction is understood as the evaluation of an emotion that reflects the degree to which IB customers believe their service provokes satisfactory feelings (Wong and Mula, 2009). According to Wong and Mula (2009), Danesh *et al.* (2012) and Ranaweera and Neely (2003) the greater the degree of satisfaction, the greater the retention level.

Hallowell (1996) shows there are direct relationships between satisfaction and customer retention and, between retention and profitability. Wong and Mula (2009) also corroborate the relationship between satisfaction and customer retention.

Therefore the following hypothesis will be tested in the Portuguese context:

H2. For internet banking users the higher satisfaction level, the greater customer retention.

We used the three items listed in the analysis of Wong and Mula (2009) and Ranaweera and Prabhu (2003), one reflecting a more emotional perspective and the other two, a more rational one.

• Switching Costs

Switching costs are defined as the perception regarding the magnitude of costs necessary for IB customers to end their current relationship with IB service and ensure an alternative (Wong and Mula, 2009). "*Time, money and your effort, all of these items define switching costs which in result make your perception as difficulty to switch*" (Danesh *et*

al., 2012). They integrate costs of a financial nature, but also resistance and convenience factors as costs of searching for a new service provider, transfer costs, learning needs required for the new service, potential loss of loyalty programs, user habit, emotional adjustment and perception of financial, psychological and social risk (Fornell, 1992).

Given the importance of maintaining the customer base the IB implementation should not neglect the construction of exiting barriers to customers, namely by applying higher switching costs (Sheshunoff, 2000). The author concludes that a client using full service IB complemented with automatic debit orders and scheduled automatic transfers is significantly less prone to exit to another bank.

Customer satisfaction is not the only issue capable of retaining customers in firms (Jones and Sasser, 1995, cited by Danesh *et al.*, 2012). Switching costs can also influence customer retention to a large extent. Ranaweera and Prabhu (2003) and Danesh *et al.* (2012) have proved the positive effect of switching costs in customer retention. Wong and Mula (2009) have also validated on IB users that the perceived higher switching costs influence higher retention levels.

We used the same five items indicated by Wong and Mula (2009) (originally withdrawn Ping (1993), cited by the authors). We, therefore, propose an identical hypothesis in the Portuguese context:

H3. For internet banking users the higher perceived switching costs, the higher the retention levels.

• Price perception

Price perception is defined as the customer's perspective regarding value and includes different perspectives: the target price, the perceived price and the perceived sacrifice necessary to get the product / service (Zeithaml, 1988).

Ranaweera and Neely (2003) and Jiang and Rosenbloom (2005) found that price perceptions have a direct effect on retention and on greater repurchase intention. In the banking sector, Varki and Colgate (2001) found that price perception affects customer retention in the service. Therefore, we propose the following hypothesis:

H4. For internet banking users, the better the price perception,

a) the higher the repurchase intention.

b) the higher the retention level.

Given the literature reviewed and according to Ranaweera and Neely (2003) only one item was previously validated and consequently, the only one used in this study. Although the internal reliability could not be tested, to the extent that the item is correctly written and consistent with the literature, it results in a valid measure (Ranaweera and Neely, 2003).

• Price sensitivity

Price sensitivity is the variable with the greatest impact on the dropout rate of banks (Colgate and Hedge, 2001). This study aims to analyze in which way the use of remote channels, more specifically the IB channel, can mediate the relationship with dimensions that can be controlled by banks to prevent customer dropout such as satisfaction and exiting barriers.

According to Proença and Rodrigues (2011), in the specific case of Portugal, SST users are more price sensitive than non-users, an opposite conclusion of Mols (1998). Santonen (2007) verifies that price sensitivity is related to customer abandonment probability.

In this study three items validated by Santonen (2007) were used, two of them also present in Proença and Rodrigues (2011). Price sensitivity was the only variable measured at bank level and not specifically on the IB service, since this study aims to measure in which way intensity of IB use can:

a) mediate satisfaction and customer price sensitivity on their banking service

b) mediate perceived switching costs and customer price sensitivity on their banking service

Therefore, the sub-universe of IB users that use it as the primary channel and with high intensity, defined in this study as frequent users (heavy users) are faced with these two hypotheses:

H5. For IB heavy users, the greater the degree of satisfaction, the lower price sensitivity.

H6. For IB heavy users, the higher the perceived switching costs, the lower price sensitivity.

In summary, the conceptual framework with the hypothesis is the following:

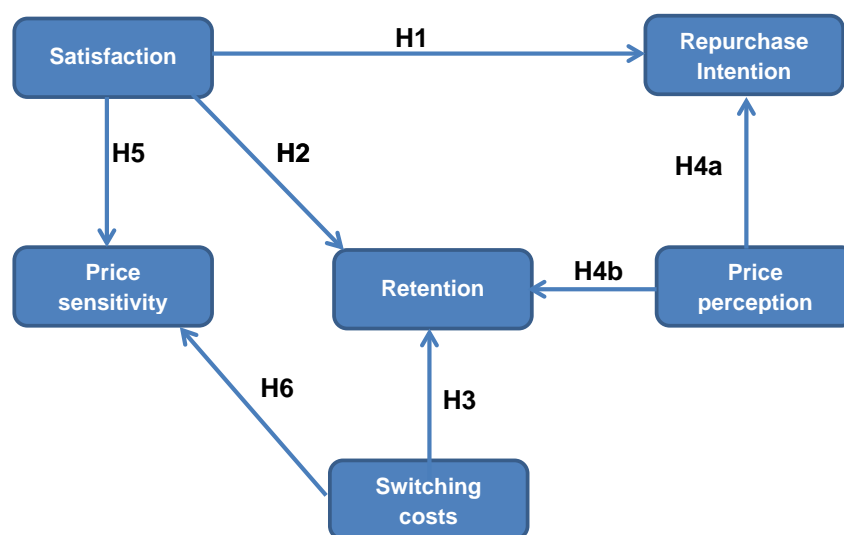


Figure 1 – Conceptual Framework

4. Portuguese Context

There are 35 banks authorized to operate in the country however around 78% of total assets and liabilities of the banking system is concentrated in 5 banks: Santander Totta, CGD (CGD), BES (BES), Millenium BCP and BPI (Portuguese Investment Bank). In 2011 the total revenue resulting from these banks's activity represented 76% of total PBS' revenue (these banks represent 60% of branches and 66% of employees). The three main virtual commercial banks operating in Portugal are Activo Bank, Banco BEST and BIG. According to data from the APB (2012) its joint share in number of employees is 0.8% and 0,3% in assets and liabilities. Total revenue resulting from their activity in 2011 accounted 0.7% of total PBS.

This model will have to be adjusted to a more focused, knowledgeable and demanding universe of customers and seize less explored opportunities in customer service. Remote channels may represent an opportunity (becoming an ever more representative distribution channel) on the redesigning of the sector's business model in line with greater cost efficiency and maximizing customer relationship.

The number of Internet users in Portugal has undergone a significant growing trend. In 2002, 19% of the population in the age group of 16 to 74 used the internet and 10 years later that figure almost tripled (55%) (INE, 2011).

Even though there are concerns with regards to security issues (52% of individuals who use internet are concerned with potential security issues such as phishing or a fraudulent use of a payment card) (INE

online, 2012) the number of IB customers in 2011 totaled 2.2 million, triple the value compared to 2003 (Marktest, 2011). The IB penetration rate in Portugal in 2011 was roughly 22% and since 2003 has had an average annual growth rate of about 18% (Eurostat online, 2012). In 2011, the proportion of IB users within the Portuguese internet users, rose to 40% (INE online, 2012), twice the IB penetration rate in Portugal.

Regarding the Portuguese IB non-users, the preference for automatic teller machines (ATM) is indicated as the main reason (27%) for not subscribing this channel, followed by difficulty in dealing with technology (19%), lack of confidence in the service security (19%), lack of a regular access to the internet (18%), and the preference for direct contact with the branch (15%).

The average number of channels used to contact the main bank is of utmost importance since customers using multiple channels demonstrate twice the loyalty compared to customers who only use the branch to interact with the bank (McKinsey, 2011).

According to Marktest (2011) ATM machines are the preferred means by which customers contact their main bank, totaling about 5.9 million Portuguese users. The second preferred means is through personal contact, however branch use has been decreasing. IB is the third most common form of contact used by customers.

5. Methodology

The dimensions reviewed in the literature and used in this study were measured by means of a

questionnaire using a 5-point Likert scale (where 1 - strongly disagree and 5 - strongly agree, 1 - very unlikely and 5 - very likely) and based on literature where the internal consistency of items was duly validated.

The questionnaire was divided into three parts. The first part collected socio-demographic data. In the second part of the questionnaire it was intended to determine which remote channels are used by customers to access their bank accounts, the use frequency and the involvement level with the specific channel of IB. For IB non-users it was questioned the main reason for non adoption in order to ascertain the aspects influencing resistance to this channel. These respondents did not accede to the next phase of the questionnaire.

In the last part of the questionnaire it was asked respondents' opinion on a set of items to assess their experience and behavior towards the use of IB service with regards to constructs of satisfaction, perceived switching costs, price perception (with IB service), price sensitivity (with the bank), repurchase intention and retention.

Closed questions were used to ensure uniformity of responses and the subsequent facilitation of the statistical analysis work.

The questionnaire was pre-tested on five people, some changes were made and then it was sent by email and made available over the internet. 191 valid responses were obtained.

6. Results

The sample is characterized by individuals, mostly male (54%) aged between 25 and 54 years (86%), mostly married or in a marital equivalent situation and with a degree or higher academic level. 92% of respondents are employed, mainly employees with a monthly net income ranging between 1,000 € and 2,500 €

All 191 respondents are bank customers and stated working with one or more banks.

Considering the frequency of use, results showed that mobile banking, telephone banking (via call center) and contact with the branch via phone or email are the least used channels. The branch seems to be the fourth less used channel having no effect regarding frequency of use when transactions such as depositing and withdrawals are excluded.

The channels most used are ATM and IB (the latter being the channel with largest daily use).

It was possible to estimate an average number of 2.40 channels used representing a slightly lower level of multi-channel usage compared to the figure registered in Europe, 2.60 (McKinsey, 2011).

The most frequent combination of channels used was ATM and IB (26% of sample), only IB (12%), branch, ATM and IB (11%) and only ATM (10%).

Regarding the involvement with IB and where specifically used as a form of contact with the main bank, 12% use it as the exclusive channel to access their accounts and 65% of respondents accumulate IB with other channels adopting a multichannel behavior.

The duration of the relationship expresses loyalty levels given that 75% of IB users have maintained a relationship with their main bank for more than two years (50% of which over more than five years). According to Proença and Silva (2007) the duration and continuity of the relationship between customer and bank influences IB use.

Among non-users of IB (31 respondents) the most frequent reason for not using the service is the preference for the use of ATM followed by the lack of confidence in the channel's security (in line with the literature reviewed, the perceived risk by non-users is considered a barrier to the adoption of this channel).

On average, respondents are moderately satisfied, do not perceive switching costs as high (which implies greater risk of dropout) and consider the service price as appropriate. They do not intend to quit the service but are sensitive regarding the prices charged by the bank and are prone to change due to bank fees and commissions charged.

A factor analysis was employed to confirm the underlying structure of the constructs. The Cronbach's alpha method was used to estimate the internal consistency. The values obtained range from a minimum of 0.609 (poor but acceptable) for the satisfaction dimension (with IB service) and a maximum of 0.922 (excellent) for retention (in IB service). The results of internal consistency values followed Hill and Hill (2005) grade.

The results of those analysis confirmed both reliability and validity of the measures validated in literature and used in this study.

Table 2 – Reliability test of the constructs of Internet Banking (Cronbach's Alpha)

	Cronbach's Alpha	Nr. of items
Satisfaction	0,609	3
Switching costs	0,648	5
Repurchase intention	0,688	2
Retention	0,922	2
Price sensitivity	0,748	3

Table 1 – Correlation Coefficient Marix for constructs

		Satisfaction	Switching Costs	Repurchase	Retention	Price Sensitivity
Satisfaction	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	160				
Switching Costs	Pearson Correlation	,101	1			
	Sig. (2-tailed)	,206				
	N	160	160			
Repurchase	Pearson Correlation	,530**	,116	1		
	Sig. (2-tailed)	,000	,144			
	N	160	160	160		
Retention	Pearson Correlation	-,170*	-,194*	-,209**	1	
	Sig. (2-tailed)	,032	,014	,008		
	N	160	160	160	160	
Price Sensitivity	Pearson Correlation	,050	-,243**	,048	,174*	1
	Sig. (2-tailed)	,526	,002	,549	,028	
	N	160	160	160	160	160

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

			Satisfaction	Switching Costs	Repurchase	Retention	Price Sensitivity	Price perception
Spearman's rho	Price perception	Correlation Coefficient	,320**	,130	,347**	-,198*	-,140	1,000
		Sig. (2-tailed)	,000	,101	,000	,012	,076	
		N	160	160	160	160	160	160

* . Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

For a significance level (α) of 0.01 there is significant statistical evidence of a strong positive relationship between satisfaction with the IB service and repurchase intention ($r = 0.530$). This result is consistent, in the context of IB users in the Lisbon Metropolitan area, with Mols (1998) and Santonen (2007) studies.

Satisfaction with IB service relates poorly and inversely with retention ($r = -0.170$). This negative relationship is due to the fact that the questionnaire items which measured retention inquired about the likelihood of current service dropout, where 1 = very unlikely and 5 = very likely. In accordance with Wong and Mula (2009), Danesh *et al.* (2012),

Ranaweera and Neely (2003), there is a direct relationship between greater satisfaction and less likelihood of customer dropout.

There is a weak negative relationship between perceived switching costs and retention in the IB service ($r = -0.194$). As in Ranaweera and Prabhu (2003), Danesh *et al.* (2012) and Wong and Mula (2009), results confirm the effect of switching costs in customer retention (implying a lower probability of dropout).

There is a direct and moderate relationship ($\rho = 0.347$) between perceived price and repurchase intention. Moreover, there is a weak negative relationship between perceived price and retention ($\rho = -0.198$), statistically significant ($\text{sig.} \leq 0.05$). Therefore like Ranaweera and Neely (2003), Jiang and Rosenbloom (2005) and Varki and Colgate (2001), price perception of IB service has a direct effect on repurchase intention and less likelihood of customer dropout.

There is a weak negative relationship between satisfaction with IB service and price sensitivity to the price charged by the bank ($r = -0.068$), but not statistically relevant ($\text{sig.} > 0.05$), thus not confirming H5. The intensity of IB use does not moderate the effect between satisfaction and sensitivity to the price charged by the bank.

There is a weak negative relationship between perceived switching costs and sensitivity to the price charged by the bank ($r = -0.212$). There is a relationship between perceived switching costs and lower price sensitivity among customers who use IB intensely ("often" and "every day"). It thus confirms H6.

7. Conclusions

The banking sector is in a deleverage process being the credit the main component of the balance sheets, and also the main component of the sector's profitability. The PBS return on equity (ROE) decreased about 80% penalizing the sector's attractiveness to investors.

This combined effect has led to the deterioration of net interest revenue. In order to boost results, alternatives presented to banks are, on one hand, generate income from fees and commissions through a differentiated offer capable of retaining and extract value from a broad base of customers, and on the other, reduce their costs.

The capacity reduction has been one aspect of the strategy to reduce costs. However, there is enormous potential inherent to the access of banking services

through remote channels, since the cost of an electronic transaction is six times less than the equivalent manual process (Kalacota and Freire, 1997, cited by Proença and Rodrigues, 2011). Relationship marketing can capitalize frequent and proactive access by customers through these channels, with a low cost targeted and personalized communication. Additionally, with reduced physical presence, these channels enable contact with a much wider market not otherwise possible through the branches.

Technological evolution is reflected in the behavior pattern of the Portuguese people, who increasingly adhere to internet-based and self-service technologies. This use on a self-service basis is reflected in the banking channels preferences evidenced by customers: ATM and IB are the fastest growing channels and the traditional channel (branch) shows the opposite trend.

Given the inevitability of a customer market with preference for remote channels, internet banking should be integrated in the overall corporate strategy and market positioning. According to Porter (2001) this integration must be carried out complementing approaches through different channels (and not cannibalizing them), creating competitive advantages hardly matched by the competition.

The study conducted in the metropolitan area of Lisbon, with 191 responses obtained, concluded that the channels with greater intensity of use are ATM and IB, being the branch, telephone banking, mobile banking and contact by e- email / phone with the branch the ones less used. The findings also suggest that there are variables on the behavior use of IB influencing the intention to continue with the service. The greater the satisfaction with the service, perceived switching costs and favorable perceived price, the more likely customer retention in IB service. It was also found that repurchase intention is positively influenced by customer satisfaction and perception of the service price.

For customers with intensive use of IB service results showed that the greater the exiting barriers perceived by these customers, the lower the sensitivity to prices charged by the bank. However, it was further found that no relationship exists between the satisfaction degree of those customers with IB service and their price sensitivity.

With adequate knowledge of the decisive factors in the behavior of customers using remote channels, banks should adopt measures and strategies to ensure the maintenance of existing customers and increase focus on attracting new ones.

From a management point of view, banks should promote the use of remote channels due to the advantages they mutually represent to customers and banks, establishing differentiating factors that ensure competitive advantage, and as such, may lever its business model.

8. Managerial implications

The study findings suggest that the use of channels to access banking services has been suffering changes. The number of customers accessing the traditional distribution channel has decreased, while remote channels assume higher expression as a means of contact. The most used channels are ATM and IB (the latter being the channel with largest daily use).

From a management point of view, banks should enhance CRM namely through a relationship marketing approach which offers the advantages of a personalized and low cost communication, in order to extract value from the frequent and proactive use of remote channels by their customers.

The average number of channels used by customers in Lisbon is 2.4 (2.6 in Europe), therefore the multichannel behavior should be considered by banks incorporating remote channels in the overall distribution and market positioning strategy. This aspect is of great importance since customers using multiple channels demonstrate twice the loyalty comparing to customers who only use the branch (McKinsey, 2011). That integration should ensure that communication to customer is unified regardless of the channel used.

With regards to IB service, although users in Lisbon metropolitan area do not express intention to abandon the service, there are some perceived factors which influence the service continuity intention. For IB users in Lisbon area, the higher the satisfaction level, the higher repurchase intention and greater intention to remain in the current service. Banks can control indicators that measure satisfaction, for example, through satisfaction questionnaires and customer quality controllers adopting corrective measures, if necessary.

Since perceived switching costs affect retention, banks can personalize the service and distinguish it from the competition, so that customers who consider switching service may identify a potential loss. Since the emotional aspect of switching costs is valued by 79% of the respondents (who agree that having to change their service would be disappointing), the approach of a personal contact, through a branch manager for example, can reinforce this exiting

barrier. This is also true for heavy users of IB service since the higher the perceived switching costs, the lower the sensitivity to price charged by the bank.

Given that price perception has a positive effect on repurchase intention and retention, banks should adopt a communication strategy that demonstrates the financial benefits of the service, building a proper price image among customers.

The security issues concerning the IB channel are indicated as one of the main reasons for not using it and it is seen as a disadvantage by users, so banks should strengthen security mechanisms in virtual access (stronger passwords, matrice cards held by customers for validation of transactions). Banks that position themselves differently in this aspect referred in all IB related studies will achieve a competitive advantage over competitors.

9. Limitations and future research directions

Given that the empirical study focused on bank customers in the region of Lisbon, the results obtained in this investigation are limited to the sample. Future studies should consider more representative universes in other Portugal regions in order to obtain findings for the whole Portuguese context.

Future studies should also consider other forms of inquiry, not limited to the use of the internet. The dimensions that analyzed customer behavior emphasized some of the important aspects of user experience of channels supported by remote technologies. However, there are other dimensions that can be explored in the future such as word-of-mouth, complaints behavior, aspects valued by customers not covered by current service, sensitivity to price differentiation per channel and the trustworthiness in the service (as a perceived risk variable).

The dimensions mentioned focused only the IB service so future research should also examine other self-service technologies. The type of transactions performed per channel was not addressed in this study, however it would be interesting to analyze the channel preference due to the possible complexity of the transactions made.

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References

- [1] Bitner, M. J., Brown, S. W. and Meuter, M. L. (2000), Technology Infusion in Service Encounters, *Journal of the Academy of Marketing Science* 28(1), 138-149.
- [2] Colgate, M. e Hedge, R. (2001), An investigation into the switching process in retail banking services, *International Journal of Bank Marketing* 19(5), 201 – 212.
- [3] Colgate, M. and Varki, S. (2001), The Role of Price Perceptions in an Integrated Model of Behavioral Intentions, *Journal of Service Research* 3, 232-240.
- [4] Danesh, S. N., Nasab, S. A. and Ling, K. C. (2012), The Study of Customer Satisfaction, Customer Trust and Switching Barriers on Customer Retention in Malaysia Hypermarkets, *International Journal of Business and Management* 7(7), 141-150.
- [5] Devlin, J.F. (2002), Customer knowledge and choice criteria in retail banking, *Journal of Strategic Marketing* 10(4), 273-290.
- [6] Devlin, J.F. and Gerrard, P. (2004), Choice criteria in retail banking: an analysis of trend, *Journal of Strategic Marketing* 12(1), 13-27.
- [7] Fornell, C. (1992), A National Customer Satisfaction Barometer: The Swedish Experience, *Journal of Marketing* 56(1), 6-21.
- [8] Galbreath J. (2002), Twenty-first century management rules: the management of relationships as intangible assets, *Management Decision* 40(2), 116 – 126.
- [9] Hallowell, R. (1996), The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study, *International Journal of Service Industry Management* 7(4), 27-42.
- [10] Hill, M.M. and Hill, A. (2005), *Investigação por questionário*, 2ª edição. Lisboa: Edições Sílabo.
- [11] Jiang, P. and Rosenbloom, A. (2005), Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time, *European Journal of Marketing* 39 (1/2), 150-174.
- [12] Liao, Z. and Cheung, T. (2002), Internet-based e-banking and consumer attitudes: an empirical study, *Information & Management* 39, 283-295.
- [13] Martenson, R. (1985), Consumer Choice Criteria in Retail Bank Selection, *International Journal of Bank Marketing* 3(2), 64 – 74.
- [14] Meuter, M.L., Bitner, M.J., Ostrom A.L. and Brown, S.W. (2005), Choosing Among Alternative Service Delivery Modes: An Investigation of Customer Trial of Self-Service Technologies, *Journal of Marketing* 69, 61-83.
- [15] Mols, N.P. (1998), The behavioral consequences of PC banking, *The International Journal of Bank Marketing* 16(5), 195 – 201.
- [16] Mols, N.P. (1999), The internet and the bank's strategic distribution channel decisions, *The International Journal of Bank Marketing* 17(6), 295 – 300.
- [17] Mols, N.P. (2001), Organizing for the effective introduction of new distribution channels in retail banking, *European Journal of Marketing* 35(5/6), 661 – 686.
- [18] Porter, M.E. (2001), Strategy and the Internet, *Harvard Business Review*, March, 62–78.
- [19] Proença, J. and Rodrigues, M.A. (2011), A utilização de tecnologias “self-service” nos serviços bancários e a sua influência no comportamento do consumidor em Portugal, *Revista Portuguesa e Brasileira de Gestão* (Jan-Jun), 62-77.
- [20] Proença, J. and Silva, M. (2007), Os efeitos da desmaterialização das relações bancárias devido ao uso do Internet «Banking» e do marketing relacional, *Revista Portuguesa e Brasileira de Gestão* (Out-Dez), 88-102.
- [21] Ranaweera, C. and Nelly, A. (2003), Some moderating effects on the service quality-customer retention link, *International Journal of Operations & Production Management* 23(2), 230-248.
- [22] Ranaweera, C. and Prabhu, J. (2003), The influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting, *International Journal of Service Industry Management* 14(4), 374 – 395.
- [23] Reichheld, F. F. and Sasser, W. E. (1990), Zero defections: quality comes to services8(5), 105-111.
- [24] Santonen, T. (2007), Price sensitivity as an indicator of customer defection in retail banking, *International Journal of Bank Marketing* 25(1), 39 – 55.
- [25] Sathye, M. (1999), Adoption of Internet banking by Australian consumers: an empirical investigation, *International Journal of Bank Marketing* 17(7), 324 – 334.
- [26] Sheshunoff, A. (2000), Internet Banking - an update from frontlines, *ABA Banking Journal* 92(1), 51-55.
- [27] Wong, C. and Mula, J.M. (2009), The Moderating Effect of Switching Costs on the Customer Satisfaction-retention Link: Retail Internet Banking Service in Hong Kong, *Ibima Business Review* 2, 20-28.
- [28] Yiu, C.S., Grant, K. and Edgar, D. (2007), Factors affecting the adoption of Internet Banking in Hong Kong – implications for the

banking sector, *International Journal of Information Management* 27, 336-351.

- [29] Zeithaml, V.A. (1988), Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence, *Journal of Marketing* 52(3), 2 – 22.
- [30] Rodrigues, M.G. (2008), A utilização de tecnologias self-service nos serviços bancários e o comportamento do consumidor em Portugal. Tese de Mestrado em Marketing, Faculdade de Economia da Universidade do Porto.

Others:

- [31] Associação Portuguesa Bancos,
<http://www.apb.pt/>
- [32] Banco de Portugal (2011), Relatório do inquérito à literacia financeira da população portuguesa,
<http://www.bportugal.pt/pt-PT/OBancoeoEurosistema/ComunicadoseNotasdeInformacao/Documents/RelatorioInqueritoLiteraciaFinanceira.pdf>
- [33] Eurostat,
<http://epp.eurostat.ec.europa.eu/>
- [34] Instituto Nacional de Estatística (INE),

<http://www.ine.pt>

- [35] INE (2011), Sociedade da Informação e do Conhecimento - Inquérito à Utilização de Tecnologias da Informação e da Comunicação pelas Famílias 2011,
http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=107940220&DESTAQUESstema=55483&DESTAQUESmodo=2
- [36] Marktest (2003), A Utilização do Serviço de Home Banking em 2003,
<http://www.marktest.com/wap/a/n/id~2db.aspx>
- [37] Marktest (2011), Aumenta penetração de homebanking,
<http://www.marktest.com/wap/a/n/id~171b.aspx>
- [38] McKinsey & Company (2011), Face-to-Face: a €15-20bn multichannel opportunity,
https://solutions.mckinsey.com/branchinsights/_SiteNote/WWW/GetFile.aspx?uri=%2Fbranchinsights%2Fdefault%2Fenus%2Ffiles%2Fwp1591276990%2FFace-to-Face%20-%20a%20EUR%2015-20bn%20multichannel%20opportunity_43e0f6bf-e712-4a6c-aa6d-7eee8343e502.pdf